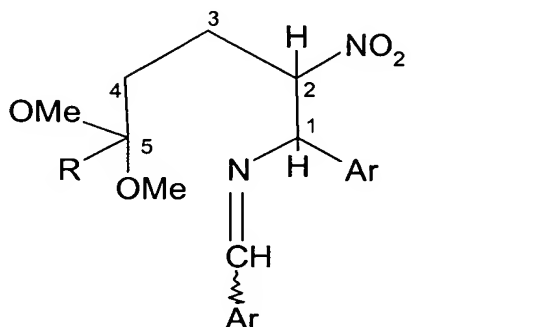
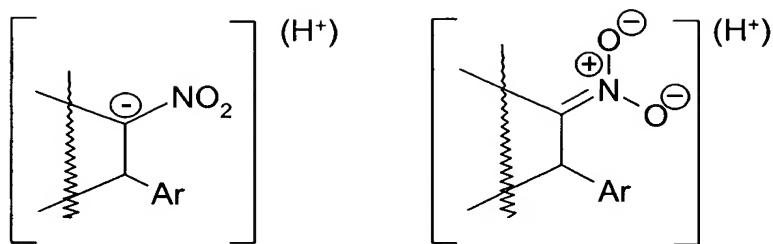


We Claim

1. A process for preparing a pure cis isomer from a mixture of cis-trans isomers of formula



- 5 wherein Ar is phenyl or naphthyl optionally mono-or disubstituted by C₁₋₅ alkyl, C₁₋₅ alkoxy, halogen, trifluoromethyl, ester or amido; and R is C₁₋₅ alkyl;
comprising the steps of:
- a. dispersing a mixture of cis and trans isomers of formula I in an inert solvent wherein said cis isomer is substantially less soluble than said trans isomer;
- 10 b. heating said dispersion to completely dissolve said trans isomer and to dissolve at least 10% by weight of the cis isomers;
- c. maintaining said heating step to allow interconversion of said cis and trans isomers;
- d. cooling said mixture thereby crystallizing the cis isomer; and
- 15 e. separating said crystalline cis isomer from said solvent.
2. The process according to claim 1 wherein said formula I is comprised of a chiral carbon atom C₁ and an adjacent chiral carbon atom C₂; and
wherein C₂ is attached to a hydrogen atom and to a strongly electron withdrawing group selected from the group consisting of nitro, nitroso, nitrile, cyanato, isocyanato, nitro
20 substituted aryl, sulfonyl, and carbonyl; and
wherein at least one atom or group attached to C₁ is different from the atoms or groups attached to C₂.
3. The process according to claim 1 wherein said interconversion of the cis and trans isomers involves bond cleavage and reforming at carbon atom C₂.
- 25 4. The process of claim 3 wherein said bond cleavage and reforming takes place at the bond between carbon atom C₂ and its attached hydrogen atom.
5. The process of claim 4 wherein said bond cleavage results in an achiral transition compound having resonance formula;



6. The process of claim 5 wherein said cis and trans isomers in said solvent interconvert through said transition compound.
7. The process of claim 1 wherein said crystallization of the cis isomer results in
5 a further interconversion of the dissolved trans isomer into the cis isomer.
8. The process according to claim 1 wherein said dispersed cis and trans isomer mixture is comprised of solid cis and trans isomers in a weight ratio of about 1:1.
9. The process according to claim 4 wherein at least a portion of said cis and trans isomers are present in a solution equilibrium of said cis and trans isomer in a ratio of
10 3:1.
10. The process according to claim 1 wherein said mixture is heated to a temperature range of about 40 °C to about 55 °C.
11. The process according to claim 10 wherein said mixture is heated to a temperature range of about 40°C to about 45°C.
- 15 12. The process according to claim 1 wherein said heating step continues for a period of at least one hour.
13. The process of claim 10 wherein said heating step continues for a period of about 4 to about 10 hours.
14. The process of claim 1 wherein said mixture is cooled to a temperature of
20 about 0 °C to about 35 °C.
15. The process according to claim 1 wherein R is C₁-C₅ alkyl.
16. The process according to claim 1 wherein Ar is phenyl.
17. The process according to claim 1 wherein said compound of formula I is benzylidene-(5,5-dimethoxy-2-nitro-1-phenyl-heptyl)-amine.
- 25 18. The process according to claim 1 wherein said inert solvent is selected from the group consisting of an alcohol having formula R¹OH, a mixture of alcohols having formula R¹OH, and a mixture of water with one or more alcohols of formula R¹OH wherein R¹ is C₁-C₅ alkyl.
19. The process according to claim 18 wherein said solvent is methanol.
- 30 20. The process according to claim 1 wherein said mixture is comprised of four stereoisomers.

21. The process according to claim 20 wherein said four stereoisomers are comprised of two pair of enantiomers.

22. The process according to claim 24 wherein a first pair of enantiomers consists of a cis isomer and its mirror image and a second pair of enantiomers consists of a
5 trans isomer and its mirror image.

23. The process of claim 22 wherein said cis isomer and said trans isomer are diastereoisomers.

24. The process according to claim 1 wherein said cis and trans isomers are interconverted through transition compounds having the resonance formulas,

